

### III. REMARKS

Claims 1-4, 6-9, 11-13, 15-21, 23, and 24-26 are pending in this application. Claim 25 was previously withdrawn. Claims 5, 10, 14, and 22 were previously cancelled. By this Amendment, claim 11 has been amended. Reconsideration in view of the above amendment and the following remarks is respectfully requested.

Applicant does not acquiesce in the correctness of the rejections or objections and reserves the right to present specific arguments regarding any rejected or objected-to claims not specifically addressed. Further, Applicant reserves the right to pursue the full scope of the subject matter of the claims in a subsequent patent application that claims priority to the instant application.

Applicant acknowledges and appreciates the Office's withdrawal of its earlier objections to and rejections of the pending claims.

In the Office Action, claim 11 is objected to as being dependent upon a cancelled claim. By this Amendment, claim 11 has been amended to depend from claim 9 rather than claim 10. Accordingly, Applicant respectfully requests withdrawal of the objection.

In the Office Action, claims 1, 3, 4, 8, 9, 11-13, 15-17, 19, 21, 23, and 24 are rejected under 35 USC 103(a) as allegedly being unpatentable over US Patent No. 5,975,535 to Gail et al. in view of US Patent No. 6,220,602 to Webster et al. Applicant asserts, however, that the Office has misinterpreted Gail et al.

The Office alleges, *inter alia*, that Gail et al. teach "a free portion (2) adapted to be angled relative to a longitudinal axis and all radial axes of a component (4) to be sealed against...wherein the free portion (2) contacts a distal end (6) [of a support portion] in a pressurized operative state." Office Action at 3.

First, Applicant asserts that free portion of the seal of the Gail et al. device is not “angled relative to a longitudinal axis” of the component to be sealed against. Rather, in all cases disclosed by Gail et al., the free portion is normal to the longitudinal axis:

...the free ends of the bristles 6 protrude radially inwardly against the outer circumferential surface of the rotor shaft 1...

Gail et al. at col. 4, ll. 29-31.

The bristles 6 may be arranged in the housing 4 such that their radially inwardly directed free ends protrude toward the rotor 1 essentially radially, or with a circumferential tilt angle relative to the respective radial direction.

Gail et al. at col. 4, ll. 43-46.

Thus, in all embodiments described by Gail et al., the free ends of the bristles project toward the rotor shaft in a radial direction, i.e., in a direction normal to the longitudinal axis of the rotor shaft. As such, the free ends of the bristles are not “angled relative to a longitudinal axis” of the component to be sealed against, as recited in each of claims 1, 9, 19, and 24, as well as in independent claim 26.

Second, Applicant asserts that the free portion of the bristles of the Gail et al. device do not contact a distal end of a support in a pressurized operative state. The portion of Gail et al. relied upon by the Office itself makes this clear.

With this arrangement, the radially inner free end portion of the bristles 6 between the step 14 and the sealing gap S are elastically deflectable in the *circumferential* direction, and to a limited extent also in the *axial* direction, so that an eccentric running motion of the rotor 1 can be compensated for while still providing an effective seal.

Gail et al. at col. 5, ll. 30-35 (emphasis added).

Thus, as can be seen in FIG. 1 of Gail et al., to which the above quotation refers, a circumferential deflection of bristles 6 would be in a direction into and out of the page while an axial deflection would be to the right or left side of the page. In order for the bristles to contact the second holder disk 5B (which the Office has referred to as distal end 6 in its figure), they would have to be deflected toward the right hand side of the page to a degree sufficient for the bristles to actually contact the second holder disk. Gail et al. make no such disclosure or suggestion.

For the same reason, the Office's allegation that Gail et al. teaches that "the free portion (2) is adapted to be closer to the component (4) to be sealed against during the pressurized operative state than in the unpressurized inoperative state" is also false. If the bristles are either circumferentially or axially deflected by "eccentric running motion of the rotor," the bristles are *by definition* not closer to the rotor than when undeflected. Gail et al. at col. 5, ll. 30-35. Simply put, the bristles cannot be deflected by the running rotor and also be closer to it.

The Office concedes that Gail et al. disclose a brush seal rather than the claimed leaf seal. The Office alleges, however, that Webster et al. teach "a seal arrangement where either a brush seal or leaf seal may be used...thereby establishing the seals as equivalent." Office Action at 5.

Applicant asserts, however, that the Office's allegation is a *non sequitur*. Assuming, *arguendo*, that either a brush seal or a leaf seal may be used in the Webster et al. seal arrangement, it does not follow that any aspect or arrangement of a brush seal is applicable to a leaf seal. For example, as noted above, Gail et al. describe the bristles of their brush seal as deflectable in a circumferential direction, but this quality is

not applicable to a leaf seal, whether that of Applicant or Webster et al. This is so due simply to the shape of a leaf seal. For example, referring to FIG. 5 of the present application, leaf seal members 24 would not be deflectable in a circumferential direction (i.e., toward the left and/or right sides of the page). Thus, Applicant asserts that not only is there no motivation or suggestion provided in Gail et al. or Webster et al. to combine the circumferential deflectability of the Gail et al. brush seal with the leaf seal of Webster et al., but that one skilled in the art would recognize that it is impossible to do so.

Nevertheless, in order to eliminate any possible confusion between the claimed orientation of the present application's leaf seal members and Gail et al.'s "circumferential tilt angle" described above, each of claims 1, 9, 19, 24, and 26 has been amended to more clearly describe the leaf seal members as longitudinally angled relative to all radial axes of the component to be sealed against.

For each of the reasons above, Applicant asserts that none of claims 1, 9, 19, and 24, or claims 3, 4, 8, 11-13, 15-17, 21, or 23, which depend therefrom, is obvious in view of Gail et al. or Webster et al., whether considered alone or in combination. Accordingly, Applicant respectfully requests withdrawal of the rejection.

In the Office Action, claims 2, 18, 20, and 26 are rejected under 35 USC 103(a) as allegedly being unpatentable over Gail et al. in view of Webster et al. in further view of US Patent No. 4,813,608 to Halowach et al.

Applicant asserts that each of claims 2, 18, and 20 is allowable for the reasons given above with respect to claims 1, 9, and 19, from which they depend. In addition, Applicant asserts that each of the arguments made above is equally applicable to the

rejection of claim 26. Accordingly, Applicant respectfully requests withdrawal of the rejection.

In the Office Action, claims 6 and 7 are rejected under 35 USC 103(a) as allegedly being unpatentable over Gail et al. in view of Webster et al. in further view of US Patent No. 5,042,823 to Mackay et al.

Applicant asserts that claims 6 and 7 are allowable for the reasons given above with respect to claim 1, from which each depends. Accordingly, Applicant respectfully requests withdrawal of the rejection.

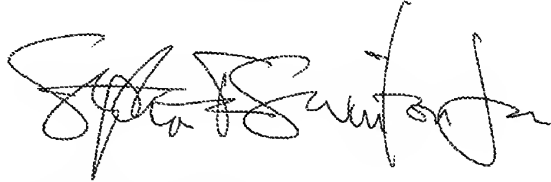
Applicant asserts that any dependent claim not specifically addressed above is allowable for the reasons given above as well as its own unique features. In view of the foregoing, Applicant respectfully requests withdrawal of the rejections and objections and allowance of the application.

Applicant feels that attention must be drawn to the very protracted prosecution of the present application. In the more than 50 months that the present application has now been pending, the Office has issued a total of six Office Actions and a Restriction Requirement (issued *after* the first Office Action). Of the six Office Actions issued, the only Final Office Action was overturned by a Pre-Appeal Panel.

The protracted and piecemeal examination of the present application has resulted in significant delay and expense to Applicant. It is clear to Applicant that the present invention is both novel and non-obvious in view of all prior art of which Applicant is aware. Applicant respectfully requests, therefore, that the Office do its utmost to bring prosecution of the present application to conclusion without the need for additional appeal.

Should the Examiner require anything further from Applicant, the Examiner is invited to contact Applicant's undersigned representative at the number listed below.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Stephen F. Swinton, Jr.", written in a cursive style.

Stephen F. Swinton, Jr.  
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